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FOOD TECHNOLOGY

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Authors of papers intended for publication in Food Technology should request from the Editor's office a copy of a booklet, titled "Suggestions to Authors," and see that their papers are in the form specified therein before they are sent to the editor.

The Institute of Food Technologists assumes no responsibility for statements in contributed articles appearing in Food Technology. Editorials present only opinions of the writers and do not necessarily reflect policies of the Institute of Food Technologists.

News of the Institute

MINUTES OF A COUNCIL MEETING OF INSTITUTE OF FOOD TECHNOLOGISTS

Hotel Lafayette, Atlantic City, N. J.
January 16, 1949

A Council meeting was held on January 16, 1949, at the Hotel Lafayette, Atlantic City, N. J. Twenty-eight Councilors were present. The meeting was called at 2:00 P. M., and presided over by President H. C. Diehl.

Secretary C. R. Fellers, in presenting the Secretary's report, stated that the paid-up membership was 2,625 with about 150 members who have ignored second notices for dues. About one-third of the members chose to pay dues for 1948 only and must be billed for 1949 dues.

As a result of the mail vote of September 20, 1948, all 20 constitutional amendments were approved by the membership. The Secretary's office has furnished stationery for all committees, the President, Editor and Advertising Manager. The office also prepares addressed tabs for mailing "Food Technology," and for the Convention Committee. Data are now being collected for a new directory of members to be distributed about April 1, 1949. Nominating ballots were circulated, and the election ballots will go forward by March 1, 1949.

Good liaison has been maintained with the 15 Regional Sections, and Geographical lists of members have been furnished to IFT Clubs in British Columbia, Oregon, Texas, Louisiana, Georgia, Virginia and North Carolina.

Treasurer Fellers read a Treasurer's progress report, indicating that without counting advertising revenue, there would be only a small balance by the end of the year. This is due largely to the cost of 12 issues of FOOD TECHNOLOGY for 1949.

The books were audited as of June 15, 1948, and found in good order. The Treasurer is bonded. The financial arrangement made in October with Garrard Press for handling non-member subscriptions and back-orders is working smoothly and is saving the Institute considerable money. The University of Massachusetts does not charge the Institute rent, utilities, telephone, mimeograph, or for other service.

The Council authorized the Secretary to purchase a file to cost approximately $50.00; also to proceed with the publication of a membership directory to cost not more than $1,500.00. The cost will be considerably less than this figure.

The Committee on Constitution proposed 58 New Amendments dealing mainly with Student Membership, and the so-called "punitive" article XI, Section 2. The Council approved these Amendments, and also three others submitted earlier, but unintentionally omitted from the last list for a mail vote. The three proposed amendments simplify election procedures and make it possible to mail election ballots four months prior to the Annual Meeting (instead of 7 months). The Council voted to delete all of Article XI, Section 2, and substitute:

> "The Council, by unanimous vote, may terminate Membership in the Institute of any Member, Affiliate or Student Member."

The Insignia and Membership Certificate Committee presented a design similar to that now on the cover of FOOD TECHNOLOGY. The design was approved.

The Committee on Liaison with the Armed Forces reported that the IFT is now recognized as the working organization of food technologists. Excellent relations have been set up with the War Department. A list of Food Technologists, including their training, experience, and specialty will be prepared by the Committee for the War Department. Col. Charles S. Lawrence, President of the Quartermaster Board, U. S. Army, gave a short address pointing out how food technologists can best serve the Armed Services.

The Committee on Qualifications reported that all Associate Members had now been reclassified as either Members or Affiliates in accord with the new Constitution.

The Committee on Organization reported at length on Institute reorganization. They recommended that an Executive Committee of the Council be formed; that the IFT be not incorporated; that divisions by industries like the A.C.S. be not formed; that Regional Section publications should not compete with FOOD TECHNOLOGY for advertising, and that the future of these publications be considered carefully in the light of the general welfare of the Institute. The Committee on Organization also recommended that a paid Executive Secretary be appointed as soon as financial stability is attained, the Council to consider this matter at the time of the Annual Meetings in July 1949. The Council appointed the following Executive Committee to function for the Council until the next Council Meeting: P. K. Bates, A. G. Olson, A. E. Stevenson, E. F. Kohman, W. L. Campbell; C. R. Fellers, ex-officio, and H. C. Diehl, ex-officio. The Council requested the Organization Committee to develop costs, feasibility, location, functions, personnel, and possible savings provided an Executive Secretary's office be set up. The Committee will report at the next Council Meeting.

The California councilors, and Dr. Proctor reported on Annual Meeting plans which are now well advanced. It was announced by President Diehl that the next Council Meeting would be held in San Francisco on Saturday, July 9th, and that there would be a meeting of Regional Section officers on Sunday, July 10th. Numerous symposia, Round Tables, Technical Sessions and trips have been arranged. The membership will be circularized at least three times on the Annual Meeting. The Council approved President Diehl's plea for every councilor to do all he could to assist in the Annual Meeting, including going to San Francisco next July. All papers for the Annual Meetings should be accompanied by abstracts and press releases. Should an author wish to give a paper but publish elsewhere, arrangements may be made with Editor Ball for prompt release of the paper.

The Committee on Publicity for the Annual Meeting made a report showing detailed publicity plans. These were approved in principle by the Council.

The Report of the Committee on Regional Sections reported much interest by various regional clubs which are planning to request affiliation with the Institute. The matter of working out a satisfactory affiliation procedure for foreign groups of food technologists was assigned this Committee. Inquiries have been received from Australia and Sweden. The Council favors the establishment of foreign sections.

The Council took cognizance of the demand for student chapters, and if the Constitutional Amendments carry, such chapters will be authorized in the near future. The cost of student membership cannot be set until the Post Office Department decides whether FOOD TECHNOLOGY can be mailed to a type of membership whose dues are below the actual cost of the journal. Secretary Fellers is investigating this point for the Council.

President Diehl reported the setting up of four Technical Committees, namely:

1. Food Analysis
2. Pectin Standardization
3. Procedures in the Objective Testing of Foods
4. Chemicals in Foods

The Committees and their personnel were approved.

The Council unanimously thanked the Philadelphia Regional Section for a check for $1,732.00 from the last Annual Meeting.

In a discussion of editorial policy it was voted that "The Council favors only the use of generic names of products in the text of FOOD TECHNOLOGY, but it is permitted to further identify manufacturers and products in foot notes." The Council requested the Editorial Board of FOOD TECHNOLOGY to draw up a policy on this subject for consideration at the next Council Meeting.

The Council voted that "The term of office of all appointive officers by the Council is for a period not to exceed one year."

The Publications Committee reported details of the appointment of Harley L. Ward of Chicago as advertising manager of FOOD TECHNOLOGY. Members who are in a position to suggest advertisers are urged to get in touch with Mr. Ward at 360 N. Michigan Ave., Chicago. The Council approved the Committee's action.

The question of honorary and sustaining memberships was referred to the Executive Committee for investigation and later report.

The Council authorized the President to appoint a Chairman of a Committee on Employment. The members of his committee will be the 15 Regional Section Secretaries.

The 1950 Annual Meeting will take place at the Edgewater Beach Hotel in Chicago the third week in May 1950. The 1951 meeting will be at the Hotel New Yorker June 24-27, 1951. The Great Lakes Regional Section presented a tentative invitation for a 1952 meeting. The Council will entertain a formal invitation for the 1952 Annual Meeting in the Great Lakes area.

The Council approved the personnel on the Babcock Award Committee appointed by the President. The Council requested the Secretary to edit these minutes and mail them to the Editor for prompt publication in FOOD TECHNOLOGY.

Adjournment was at 10:45 P.M.

CARL R. FELLERS
Secretary-Treasurer.

1949 CONVENTION IN SAN FRANCISCO

Committee members to assist in the plans for the Convention in July have been appointed, and members are asked to contact these individuals directly on any subject in which they are interested. The committee members are as follows:

General Co-Chairmen: W. Ray Junk (California & Hawaiian Sugar Refining Corp., Ltd., 215 Market St., San Francisco 5, Calif.) and H. T. Griswold (Owens-Illinois Pac. Coast, 500 Sansome St., San Francisco 11, Calif.)

Program Committee: Chairman, Dr. E. M. Mrak (University of California, Berkeley 4, Calif.); Dr. G. F. Stewart (Iowa State College, Ames, Iowa); Dr. B. E. Proctor (Massachusetts Institute of Technology, Cambridge 39, Mass.); Dr. M. S. Joslyn (University of California, Berkeley 4, Calif.); Dr. C. R. Stumbo (Food Machinery Corp., 333 W. Julian St., San Jose, Calif.); and Dr. L. A. Hall (The Griffith Laboratories, Inc., 1415 W. 37th St., Chicago, Ill.).

Arrangements Committee: Chairman, Dr. P. F. Sharp (Golden State Co., 425 Battery St., San Francisco 11, Calif.); W. B. Van Arsdale (Western Regional Research Laboratory, 800 Buchanan St., Albany, Calif.); W. J. Parks (Owens-Illinois Pac. Coast); Dr. A. P. Stewart (Golden State Co.); B. Grossi (Gerber Products Co.); Dr. Leonora Hohl-Strohmaier (University of California); and J. E. McConkie (California Packing Corp.).

Transportation Committee: Chairman, E. E. Jacobs (Lyons-Magnus Co., 2545-16th St., San Francisco 3, Calif.); John B. Shields (Golden State Co., Ltd., 425 Battery St., San Francisco 11, Calif.); L. J. Lataillade (Tea Garden); A. L. Arighi (Hazel Atlas Glass Co., 64 Pine St., San Francisco 11, Calif.); and E. T. Winslow (Spreckels Sugar Co., 2 Pine St., San Francisco 11, Calif.).

Budget and Finance: Chairman, E. L. Mitchell (Richmond Chase Co., 64 W. Santa Clara St., San Jose, Calif.); T. Mansfield (Food Machinery Co., 333 W. Julian St., San Jose, Calif.).

Entertainment Committee: Chairman, R. D. McKirahan (American Can Co., 20th & 3rd Sts., San Francisco 7, Calif.); George Harnik (American Can Co., 20th & 3rd Sts., San Francisco 7, Calif.); and S. J. Leonard (Shuckel & Co., Sunnyvale, Calif.).

Women's Activities: Chairman, Irene McCarthy (Hallmark Testing Service, 4th and Jackson Sts., Oakland, Calif.); Dr. Helen L. Hanson (Western Regional Research Laboratory, Albany, Calif.); and Shirley I. Vollmer, Mrs. George Marsh, and Dr. Vera Mrak.

Field Trips Committee: Chairman, H. M. Pancoast (Food Machinery Corp., 333 W. Julian St., San Jose, Calif.); Prof. W. V. Cruess (University of California, Berkeley 4, Calif.); C. F. Love (Lyons-Magnus Co.);

L. M. Cash (Italian Swiss Colony, Asti, Calif.); J. Kilbuck (University of California); J. R. Matchett (Western Regional Research Laboratory); and E. L. Prudhomme (Richmond Chase Co., San Jose, Calif.).

Publicity and Publications: Chairman, W. S. Richert (Wines and Vines, 717 Market St., San Francisco 3, Calif.); H. E. Jahn (King Sales Co., 210-1st St., San Francisco 5, Calif.); C. R. Havighorst (Food Industries, 210-1st St., San Francisco 5, Calif.); and E. B. Stark (Western Canner and Packer, Miller-Freeman Publications, 121 Second St., San Francisco 5, Calif.).

Exhibits Committee: Chairman, Alan C. Richardson (California Packing Corp., Emeryville, Calif.); C. R. Havighorst (Food Industries, 210-1st St., San Francisco 5, Calif.); T. A. Bruce (Corn Products Refining Co., San Francisco, Calif.); M. Weir (Wallace Tiernan); and N. H. Rosberg (Nels H. Rosberg, Inc., 515 Brannan St., San Francisco 7, Calif.).

It is proposed that the symposia (B. E. Proctor, Chairman) for the Convention deal with

(a) Chemical spray residues in raw materials for processing,

(b) Long distance transportation of perishable foods, and

(c) Wine technology.

Mr. F. L. Lawler, Executive Editor of *Food Industries*, has agreed to organize a round table group on "Advanced Food and Plant Engineering."

On the opening day, July 11, it is planned to have two or three well-known speakers discuss general food problems. Vice-President Hutchison of the University of California has already agreed to participate.

Lloyd A. Hall, in charge of the Industrial and Production Program papers for the annual meeting, has already secured the following speakers (others will be added):

L. E. Slater (Brown Instrument Co., Philadelphia, Pa.): "Problems and Advances in the Control of Heat Exchangers."

A. Katz (F. Ritter & Co., Los Angeles, Calif.): "The Cultivation, Production and Curing of Vanilla Beans in Mexico" (motion pictures).

F. Lerman (Kennedy Extraction Div., The Vulcan Copper & Supply Co., Cincinnati, Ohio).

M. J. Blish, Lucile R. Mac, and M. Louisa Long (International Minerals & Chemical Corp., Amino Acid Div., Rossford, Ohio): "Free Glutamic Acid Content of Fresh, Cooked, and Canned Foods."

S. L. Galvin, A. J. Patten, and L. J. Minor (Huron Milling Co., Harbor Beach, Mich.): "Uses and Potential Applications of Hydrolyzed Vegetable Proteins for Seasoning Foods."

W. H. Cathcart (Atlantic & Pacific Tea Co., New York): (in the baking field).

G. F. Garnatz (Kroger Food Foundation, Cincinnati, Ohio): (in the baking field).

F. P. Mehrlich (Hawaiian Pineapple Co., Honolulu, Hawaii); "Quality Control in Pineapple Canning" (tentative title).

D. G. Heberlein, L. Ptak, S. Medoff, L. E. Clifcorn (Research Dept., Continental Can Co., Chicago, Ill.): "Quality and Nutritive Value of Peas as Affected by Blanching."

C. W. Kaufman and H. A. Campbell (General Foods Corp., New York): "Some Fundamental Considerations in the Processing of Frozen Orange Juice Concentrate."

J. M. Jackson *et al.* (American Can Co., Maywood, Ill.): "Factors Influencing the Processing of Vacuum Packed Whole Grain Corn" and "Effects of Blanching on the Quality and Nutritive Value of Several Vegetables."

Douglas Watson (McKinsey & Co., San Francisco, Calif.): "Controlling Seasonal Pack Cost."

W. J. Finnegan (W. J. Finnegan Co., Los Angeles, Calif.): "The Effect of Expansion on Foods and Containers due to Freezing Action."

P. V. Imes (Carey Salt Co., Hutchinson, Kansas):) "The Production of Salt for Food Use" (tentative title).

Atty. S. A. Moss (Los Angeles, Calif.)): "Food Product Liability."

F. W. Griffith (Griffith Laboratories, Inc., Newark, N. J.): "The Curing of Meat Products."

H. S. Mitchell (Swift & Co., Chicago, Ill.): "The Production of Edible Fats and Oils" (tentative title).

Guy Fox (Vice-President, Armour & Co., Chicago, Ill.).

A. H. Downey (Magnus, Mabee & Reynard, Inc., New York, N. Y.): "Essential Oils, Source, Production, and Increasing Importance in Food Industries."

Gordon Rose (Chief Inspector, Dept. Agriculture, Ottawa, Ontario): "Canadian Food Industries" (tentative title).

To facilitate the sale of booths for exhibits and displays in the Civic Auditorium, which has been reserved for the Convention, and to give the exhibitors a more accurate idea of the space available and the nature of the meeting, a brochure has been printed describing briefly the annual meeting and the exposition accompanying it. Copies of this brochure are available on request. Please see that these are used to advantage.

The Entertainment Committee is planning a Western Rodeo and an outdoor Western Barbecue.

RECOGNITION

Dr. Carl S. Miner, Director of the Miner Laboratories in Chicago, was presented with the 1949 Perkin Medal of the American Section of the Society of Chemical Industry, at a dinner in New York City on January 7, 1949. This high honor is bestowed yearly for outstanding work in applied chemistry. Following the presentation of the medal, Dr. Miner gave an address on "Science Versus Starvation."

Dr. Lloyd A. Hall, Technical Director of The Griffith Laboratories, Inc., Chicago, was elected unanimously to full membership in the University of Illinois Chapter of Sigma Xi on December 13, 1948, in recognition of his outstanding contributions to science, particularly to food chemistry. Initiation took place on January 10, 1949, at the Illinois Memorial Union in Urbana. On this occasion Dr. Hall, speaking not only for himself but for the other successful candidates for Sigma Xi membership, gave an address on "Contributions of Scientists to Social Progress."

The Institute of Food Technologists, of which these gentlemen are both members, extends its heartiest congratulations on these well-merited distinctions.

PROFESSOR CRUESS INJURED

While spending a week-end at his ranch near Danville, California, about the middle of January, Prof. William V. Cruess, of the Division of Food Technology, University of California, I. F. T. President in 1943-44, was painfully injured in a fall from a water tower. Reports are indefinite as to the extent of Prof. Cruess'

(Continued on page 11, following Book Review)

secured during that run. This time is taken as a measure of the stability of vitamin A in the oil examination.

87I. Determination of malt sirup density.

FOSNOT, R. H., AND HAMAN, R. W. *Anal. Chem., 20,* 955-57, Oct., 1948.

The use of the Brabender recording viscometer for the rapid determination of malt sirup densities has been demonstrated. An extensive application of the viscometer in routine control work has shown an accuracy comparable to that obtained with the hydrometer and pycnometer. The application of this method to other types of sirup has been indicated.

BIOLOGICAL SCIENCES

MICROBIOLOGY

88I. Studies on the microflora of flour.

JAMES, N., AND SMITH, K. N. *Canadian J. Res., 26C,* 479-84, Oct., 1948.

Bacteria and fungi, each cultured on appropriate media at 25° C., were found to constitute the major groups of organisms in five brands of commercial flour. Numbers of these organisms showed the same trend in relation to brands and the difference between brands was found to be significant. In addition, these brands harbored mesophilic acid-producing bacteria, thermophilic flat-sour spores, anaerobic thermophilic spores, spores of rope-producing bacteria and yeasts. Numbers of organisms in the latter groups did not show a consistent relationship to brands. The usual method for determining spores of rope-producing bacteria proved to be inadequate for obtaining counts of spores of species known to produce rope in bread. Replication of sampling and careful laboratory procedures were found to be necessary for obtaining reliable estitmates of any population in flour.

89I. Observations on the new statutory methylene blue test for heat treated milk.

DAVIS, J. G., AND WATSON, D. W. *Proc. Soc. Appl. Bact. 2,* 81-84 (1946) ; *Biol. Abst., 22,* No. 14465, 1425 (1948).

The methylene blue test at 37° C. was compared with the methylene blue test at 18° C., phosphatase, coliform and plate count tests. There is close agreement between the results of the half-hour methylene blue test at 37° C. and the 24 hr. methylene blue standard at 18° C. Agreement is also shown between the half-hour methylene blue standard at 37° C. and the coliform test results. The colony count at 37° shows less satisfactory agreement with the half hour methylene blue test at that temperature. Seasonal variation is more marked between the plate count tests and the half hour methylene blue reduction. The majority of samples giving high phosphatase readings also failed the methylene blue test at 18° C. and the coliform test, indicating that faulty plant management is reflected to a considerable extent by these tests.

90I. Germ free animals.

Ind. Bull. No. 2-47, Oct., 1948.

Germ free animals have been raised at Notre Dame University with no bacteria, microorganisms, viruses or spores inside or on the surface of their bodies. The article describes the method of attaining the germ free state and the peculiarities of these animals with regard to growth, diet requirements, etc.

91I. The biological activity of DDT and related compounds.

BROWNING, H. C. et al., *Canadian J. Res., 26D,* 282-300 (1948).

Sixty-eight compounds were examined for insecticidal activity, using *Drosophila melanogaster* as the test insect and the inner sides of glass containers as the test surface. The compounds included series of halogen analogues, reduced compounds, carbinols and their esters, ethanones, diphenylamines, and the gamma isomer of cyclohexane hexachloride. Activity was shown especially by the fluorine analogues and carbinol esters. Some compounds were briefly examined for mammalian toxicity.

The findings of other workers on the more important compounds are discussed and compared with those presently reported. No constant relation could be established between insecticidal activity and mammalian toxicity, or ease of dehydrochlorination. Low oil solubility was associated with low insecticidal potency (four compounds). No clear association of fat solubilizing of toxic properties with particular parts of the molecule was found.

The essentials of an active molecular structure are a two-carbon chain with one para-substituted phenyl ring on carbon 1 and a di-or tri-halogen group on a saturated carbon 2. Steric factors are also important.

92I. The insecticidal activity of DDT and related compounds against different insect species.

BROWNING, H. C., SHAPIRO, S. K., AND DUBRULE, M. *Canadian J. Res., 26D,* 301-6 (1948).

These were tested for contact insecticidal activity against two beetles, a moth, a plant bug, and a cockroach.

Fluoro-DDT showed specificity against the cockroach and carbinol-DDT against the plant bug. Comparisons with the results of earlier testing against *Drosophila melanogaster* justified its use as an indicator species.

NUTRITION

93I. Tryptophan and niacin relations and their implications to human nutrition.

ELVEHJEM, C. A. *J. Am. Diet. Assoc., 24,* 653-7 (1948).

Niacin requirement of the living organism is affected by the amino acid intake, by the kind of carbohydrate, and by the level of fat in the diet.

94I. The effect of cocoa on the utilization of dietary calcium.

MITCHELL, H. H., AND SMITH, J. M. *J. Am. Med. Assoc., 129,* 871-3 (1945).

In the growing rat, cocoa depressed the utilization of Ca in direct proportion to its oxalate content. In man, cocoa even at the tolerance limit of 20-40 gms. did not affect the Ca balance adversely.

95I. Concerning the presence of vitamin A activity in orange peel pigment.

BOOTH, V. H. *Biokhimiia 12,* 21-25 (1948) ; *Biol. Abst., 22,* 13444 (1948).

An ester of citraurin was extracted from sweet orange peel with a mixture of petroleum ether and acetone. The extract was purified by passage through a mixture of Al_2O_3 and Na_2SO_4. The ester dissolved in oil was fed to vitamin A deficient rats. On the basis of growth rate and liver assay, the ester has less than 10% of the vitamin A activity of β-carotene.

96I. The stability of iodine in iodized rock salt.

DAVIDSON, W. M., AND WATSON, C. J. *Sci. Agric. (Ottawa) 28,* 1-5 (1948) ; *Biol. Abst., 22,* No. 14115, 1393 (1948).

The stability of iodine in various types of block salt, under various conditions, was investigated. The experiment was designed to simulate pasture and stall conditions, such as would be encountered on a farm. Salt blocks were made up with and without stabilizers and with and without iron oxide. Under summer pasture conditions, all types of salt investigated rapidly lost their iodine content. Under stall conditions the loss of iodine is less rapid and shows fair stability up to 2 months. The use of stabilizers does not prevent losses of I from block salt. Under good storage conditions iodized block salt in cartons and loose iodized salt in glass jars, retains its iodine for long periods, with and without stabilizers.

ENGINEERING

97I. Waste water problems of the Swedish Sugar Corporation and proposals for purification of the waste water from Sabyholm sugar factory.

WENNSTROM, M. *Socker, 4,* 159-82 (1948).

A brief survey is given of the work at raw sugar factories and the waste waters issuing from the manufacturing processes: flume water, wash water, diffusion waste water, press water and sludge lime transport water as well as, finally, tall-tank water. Problems and purification methods given.

98I. Air sterilization by chemical vapors.

JENNINGS, B. H. *Refrig. Res. Found.,* No. 48-11, 5, Nov. 18, 1948.

Triethylene glycol is highly effective in sterilizing air at very low concentrations (0.004 milligram per liter of air)—and at this low level is non-toxic and non-odorous. This aerosol method is reported to have important uses in public health connections, but it is not recommended presently for food storages.

99I. The anion exchange equilibria in an anion exchange resin.
KUNIN, R., AND MYERS, R. J. *J. Am. Chem. Soc., 69,* 2874-8 (1947).

A study has been made of various anion exchange equilibria associated with the anion exchange resin, Amberlite IR4B, a polyamine type designated as acid adsorption, regeneration, and anion interchange. Evidence has been obtained which indicates that all three processes are true anion exchange reactions in which the equilibria for the various anions involved are dependent upon the structure and valance of the anion as well as the ionization constant of the corresponding acid. The order of the exchange "potentials" of the various anions studied was found to be: hydroxide > sulfate > chromate > citrate > tartrate > nitrate > arsenate > phosphate > molybdate > acetate = iodide = bromide > chloride > fluoride.

FOOD PRODUCTS

CEREALS AND GRAINS

100I. Chemical and nutritive changes in stored grain.
ZELENY, L. *Trans. Am. Assoc. Cer. Chem., 6,* 112-25 (1948).

At higher levels of moisture and temperature, enzymatic and respiratory activity increase sharply and chemical changes occur rapidly. During storage, the proteins of grain undergo chemical and physical changes which affect their solubility and decrease their digestibility. These changes, in some instances at least, appear to affect adversely the nutritive value of the grain. The vitamin A of yellow corn is rather unstable, thiamin in grain is fairly stable, and riboflavin, niacin, and other "B" vitamins of grain appear to be quite stable under normal conditions of storage. Of the various chemical changes that occur in grain during storage, the hydrolysis of fats with the resultant increase of free fatty acid content, appears to be one of the most rapid as well as the most easily measured. Fat acidity measurements, therefore, constitute a useful, practical means of estimating the extent of grain deterioration and of detecting incipient deterioration. An extensive bibliography is included.

DEHYDRATED FOOD

101I. Dehydrated animal products. I. Pork and chicken.
PEARCE, J. A. *Food Canada, 8,* 24-7, July, 1948.

Pork can be successfully dehydrated within four hours in a tunnel-tray drier, if it is precooked by methods that markedly reduce its moisture content. A two-stage drying process is desirable: (a) Dry bulb temperature in the first stage; 160° to 180° F. Dried pork can be further reduced in bulk by compression, and difficulties in compression have been overcome by spraying with a small amount of starch solution. It will keep for periods up to one year at 75° F. if the moisture content is kept below 10%. Chicken can be successfully dehydrated in a tunnel-tray drier. To obtain the most desirable products, the drying temperatures should not be higher than 180° F. Dried chicken will keep for about four months at 75° F.

102I. Dehydration of heat-sensitive materials.
SCHWARZ, H. W. *Ind. Eng. Chem., 40,* 2028-33, Nov., 1948.

The pilot plant phases of the development of dry orange juice powder and a dry coffee powder are discussed. Fundamental similarities between these products, as illustrated by drying rates and vapor pressure data, require specialized types of dryers. Furthermore, the economics of drying at pressures below 1 mm. makes it desirable to feed a concentrated solution to the dryer. In the orange juice process, concentration is carried out under vacuum and the concentrate is then dried in semicontinuous vertical dryers. In the coffee process, concentration is obtained during the extraction step, and the concentrate is fed to a continuous belt dryer. As a means of removing water vapor, solid phase ice condensers and liquid phase absorption systems have been tried. Equipment and control design was directed towards easily operated units. Manpower requirements were low, and no particularly complex operations were required.

FROZEN FOOD

103I. Firming strawberries before freezing.
GRAB, E. G., WEGENER, J. B., AND BAER, B. H. *Food Pack., 24,* 39-43, Nov., 1948.

The food Processing Research Unit of TVA investigated means of preventing loss of juice and mushing during thawing of strawberries. Calcium salts were not effective and gave a typical taste. Low methoxyl pectin (Exchange) added to sugar did no good. Pectinates applied in the syrup at 0.2-0.3% by weight of the fruit were helpful on whole berries and very effective on sliced fruits. In some instances drained weights greater than 100% were obtained. The appearance was greatly improved by the non-dulling glaze created. Too high a percentage of low methoxyl pectin resulted in gel formation. Alginates were very erratic in their behavior.

104I. The complete freezing of fish flesh.
MAHADWAN, V., AND CARTER, N. M. *Fisheries Res. Canada Pac., No. 76,* 85-7, Oct., 1948.

During the "critical zone of freezing" (30° to 23° F.) that has been established by other investigators as the temperature range through which fish must be frozen very quickly to avoid undesirable changes, there can be some 20% of the liquid still unfrozen; this has a bearing on the size of ice crystal formation and all that it can imply in relation to "drip" in the eventually thawed product. Five percent of the original liquid content of the cells can still remain unfrozen at 0° F., the highest temperature advisable for holding or transporting frozen fish. The volume of a flesh sample at 32° F. before freezing was carefully compared with the volume of the same sample after it had been frozen to — 15° F., thawed, and brought back again to exactly 32° F., a permanent decrease in volume was experienced. The magnitude of this permanent decrease was rather small (0.075%), but indicated that it might be related to the non-reversible changes known as "denaturation" that can occur in the proteins of fish tissue when it is frozen. There appears to be an interesting opportunity of using this experimental technique for investigating more completely the degree of denaturation caused by different rates of freezing and thawing, and caused by holding samples of frozen fish flesh at different temperatures.

FRUIT

105I. Recovery of hesperidin.
BAIER, W. E. Assignor to California Fruit Growers Exchange. U. S. 2,442,110, May 25, 1948; *Chem. Abst., 42,* 6022 (1948).

Hesperidin (I) is extd. from orange pulp in a novel and inexpensive manner. Ground orange pulp is treated with lime to harden it, after which H_2O and more lime are added to pH 11. When this liquor is recirculated over the hardened pulp I is extracted. The clear liquor containing I is drawn off, acidified with HCl to pH 5.0, and heated to 50°. Crystallization is complete within several hours, after which crystals of I are separated and further purified if so desired. Depectinized pulp may be used, and the extracted hardened pulp can easily be dried for use in animal feed.

PECTINS—JAMS AND JELLIES

106I. Physiochemical properties of karaya gum and locust bean mucilage.
KUBAL, J. V., AND GRALEN, N. *J. Colloid Sci., 3,* 457-71, Oct., 1948.

The molecular properties of two plant gums, Karaya gum and locust bean mucilage, were investigated. Sedimentation and diffusion constants, partial specific volume, and intrinsic viscosity were determined. Molecular weights and frictional ratios are given. The molecular weight of the Karaya gum is about 30 times (9,500,000) that of the locust bean mucilage (310,000) although the viscosities are about the same for the two materials. There must be, therefore, a big difference in molecular shape and behavior with the Karaya gum much more highly solvated than the locust bean mucilage. It is postulated that the locust bean mucilage forms a system of "free-draining" filamentous molecules, whereas the Karaya gum behaves more as matted coils with the solvent immobilized within the coils.

POULTRY

107I. Reduced requirement for the unknown growth factor during the later stages of growth of chickens and turkeys.
BIRD, H. R. et al. *Poultry Sci., 27,* 654 (1948).

Experiments with chickens indicated that meat meal contains considerably less of the unknown growth factor than does fish meal. Apparently the chicken's and turkey's requirements for this factor are less, per unit of feed, during the later than during the early stages of growth.

108I. Fat rancidity in eviscerated poultry. II. The effect of variation in diet on the characteristics of the fat extracted from immature turkeys.

KUMMEROW, F. A., HITE, J., AND KLOXIN, S. *Poultry Sci., 27,* 689-94, Nov., 1948.

The skin tissue of the birds was found to contain more fat and less phospholipid than the gizzard or liver tissue. Furthermore, statistically significant differences between the birds of various groups were noted in the iodine values of the fat extracted from the skin, gizzard and liver tissue. The length of the induction period of the fat extracted from the skin tissue was taken as a criterion of relative stability towards oxidative rancidity. When compared with the control birds, the fat extracted from birds which had been supplemented with linseed oil was least stable, and that from birds which had been supplemented with choline chloride or ethanolamine hydrochloride was most stable. The feeding of cholesterol, the extract of alfalfa leaf meal, or carotene also increased stability.

VEGETABLES

109I. Effect of canning on the ascorbic acid and thiamine in vegetables.

BEDFORD, C. L., AND MCGREGOR, M. A. *J. Am. Diet. Assoc., 24,* 866-9 (1948).

Comparable lots of peas, snap beans, Lima beans, and soybeans were canned with and without blanching. Except for Lima beans, the ascorbic acid retention was significantly greater in the unblanched-canned products than in the blanched-canned products. The canned vegetables contained small amounts of dehydroascorbic acid which did not increase during storage. Thiamine retention was significantly higher in the unblanched-canned peas, Lima beans, and soybeans. The results with snap beans were variable. A good vacuum is required for the retention of ascorbic acid during storage. Thiamine retention was not affected by a low vacuum.

110I. The ascorbic acid content of cabbage.

BRANION, H. D. et al. *J. Am. Diet. Assoc., 24,* 101-4 (1948).

The ascorbic acid content of cabbage varied between varieties, and in the same variety from year to year. Small cabbage tended to have a higher concentration of ascorbic acid than large cabbage. Cabbage, as purchased, usually had its highest concentration of ascorbic acid in the core which is frequently discarded by the housewife. The loss of ascorbic acid as a result of cooking in large quantities, either by boiling or steaming, was about 70%. The loss in small quantity boiling was about 60%. Standing on the steam table after cooking further increased the loss of ascorbic acid. At the end of 2 hr. on the steam table, over 90% of the original ascorbic acid had been lost.

111I. Ascorbic acid and thiamine in fresh and frozen Lima beans and soybeans.

MCGREGOR, M. A., AND BEDFORD, C. L. *J. Am. Diet. Assoc., 24,* 670-2 (1948).

Lima beans lost from 28 to 39% of the reduced ascorbic acid, 55 to 72% dehydroascorbic acid and 45 to 47% thiamine during the scalding and freezing procedures. The reduced ascorbic acid losses were similar for all times of scalding and for all methods of cooling during preparation for freezing. During storage, the losses varied with the greatest losses occurring in those lots scalded for 4 min. The air-cooled, frozen Lima beans when cooked were equal in quality to the water-cooled beans. The soybeans lost 7% of ascorbic acid and 14 to 15% of thiamine during scalding and freezing procedures. There was a 9% loss of reduced ascorbic acid and a 2 to 3% loss of thiamine during freezer-locker storage.

112I. Radio frequency blanching of cut corn and freestone peaches.

SAMUELS, C. E., AND WIEGAND, E. H. *Fruit Prod. J., 28,* 43-4, Oct., 1948.

Blanching experiments were made on cut corn and Elberta peaches, using a radio frequency generator. Grading was done by ascorbic acid determinations and organoleptic tests, using boiling water blanching as controls. Cut corn blanched in an air medium with radio frequency and cooled in a —20° F. air blast for five minutes gave practically no ascorbic acid loss and was equal to boiling water blanched cut corn in flavor and color. Blanching of peaches by radio frequency is effective, but has a deleterious effect on the volatile fruit flavors. It is possible that ultra-high frequencies may inactivate the enzymes without affecting these volatile flavors.

Book Review

FOOD PRODUCTS, Fourth Edition, by Henry C. Sherman, Mitchill Professor Emeritus of Chemistry, Columbia University. The Macmillan Company, 1948, 428 pages. Price $4.80.

Professor Sherman has thoroughly revised this well-known textbook and brought it up to date both in the text and in the long lists of references that appear at the end of each chapter. The book has been reduced in length by about twenty percent largely by omitting tables of food composition and illustrations from the several chapters and the food laws and regulations that were formerly included in the Appendices. One Appendix has been added on the Treatment of Statistical Data. This is a welcome addition that helps to clarify the reliability of values that appear in tables of nutrient composition of foods. The omissions strengthen rather than weaken the value of the book. The book is not a treatise on food technology and many of the illustrations omitted were photographs of machinery and other subjects of technological interest. Instead of the many tables of the earlier editions the reader is referred specifically to government bulletins that give these data and which are frequently revised. Copies of current food laws and regulations are also available from official sources.

The book is divided into fifteen chapters; the first deals with the chief constituents and functions of foods, the second, with principles of control and management, and the last with the best use of food and with food economics. The intervening chapters discuss the principal food groups, namely, dairy products, eggs, meat, poultry, fish, shellfish, grain products, vegetables, fruits, nuts, edible fats and oils, sugars, and food adjuncts, such as salt, spices, flavors, tea, coffee, salad dressings, soft drinks, and yeast. These topics are grouped in twelve chapters largely according to trade relationship. Each chapter has four main parts. In the author's own words these are: "(1) an account of the production of the food in question and its preparation for market . . . , (2) questions of sanitation, inspection, and standards of purity or of conventional market grade, (3) the general composition, mineral content, and vitamin values, and (4) special characteristics, digestibility, nutritive value and place in the diet." The first two parts vary in length in the various chapters and are intended primarily to convey to the reader the effect of production, processing, and handling on the dietary value of the food and not to discuss the problems of the food technologist. This reviewer feels that the discussion is sometimes too brief to accomplish its purpose. For example, the relative merits of fresh, frozen, canned, and dehydrated foods are not treated adequately, and

problems of food spoilage are also somewhat slighted. The general reader will also find the brief treatment of food standards confusing at times. The latter two parts are very thoroughly done and herein lies the chief purpose and value of the book. The subject of food economy from the viewpoint of the individual, the nation, and the world is presented both clearly and thoroughly, and the composition and nutritive values are treated comprehensively.

The book is well manufactured and practically free from typographical errors. A few statements on technological matters are questionable, but these are not serious and will be apparent to the technologist. Some slips in writing are noticeable, for example, skim-milk is not milk serum (p. 151), and hydrogenation is not applied to the preparation of lard itself (p. 316). The treatment of the references is rather casual. Where authors are mentioned in the text, their publications are sometimes found in the list at the end of the chapter and sometimes not. The author intended to indicate this by including a date with the names of the men to whose work he refers, but in several instances, as on pages 216, 240 and 271 the date has been omitted. Several of the authors mentioned in the text are not included in the references (pp. 158, 271, 298, 300) although the reader will sometimes wish to refer to the original papers for further information. This latter situation apparently arose from the omission of older references that appeared in the earlier editions. Several references to technology are included although the omission of Jamieson's book from the edible oil chapter and some others will be noticed.

Food Products will be very valuable to the general reader with some scientific background and to many who are engaged in the food industries, particularly in the fields of management, advertising, and sales. The food technologist will find it an excellent source of general ideas, but not helpful in technological information in his own field as it makes no pretense to instruction in technological detail. IRA D. GARARD.

PROTEINS AND AMINO ACIDS IN NUTRITION, edited by Melville Sahyun, Chemist Consultant, Santa Barbara, California, formerly Vice President and Director of Research, Frederick Stearns & Company, Detroit, Michigan. Reinhold Publishing Corporation, 1948, xvi + 566 pages. Price $7.50.

Dr. Sahyun has selected an eminent group of contributing editors to write the chapters of this book and has maintained the continuity of subject coverage in excellent fashion through personal authorship. With a foreword by Dr. Sahyun and an introduction by Dr. H. B. Lewis, fifteen chapters make up the volume as follows: 1. Proteins in Nutrition (Historical) by Eliot F. Beach. 2. The Biological Utilization of Proteins and Protein Requirements by H. H. Mitchell. 3. Caloric, Vitamin and Mineral Requirements with Particular Reference to Protein Nutrition by Harry J. Deuel, Jr. 4. Economic Aspects of Food Proteins by Lela E. Booker. 5. The Nutritive Aspects of Meat and Meat Products by H. R. Kraybill. 6. The Amino Acid Requirements of Avian Species by H. J. Almquist. 7. The Relation of Hormones to Protein Metabolism by Abraham White. 8. Plasma Proteins and Their Relation to Nutrition by Melville Sahyun. 9. Protein Deficiency and Its Relationship to Nutritional Anemia, Hypoproteinemia, Nutritional Edema and Resistance to Infection by Clarence P. Berg. 10. Protein and Amino Acid Nutrition in Pediatrics and in Pregnancy by S. Z. Levine. 11. Protein Nutrition in Surgical Patients by Charles C. Lund and Stanley M. Levenson. 12. The relation of Fluid and Mineral Balance to Protein Metabolism by William E. Abbott. 13. Proteins as Related to Burns by Alfred Large and Charles G. Johnston. 14. The Protein Nature of Toxins, Antitoxins and Related Substances by Elvin A. Kabat. 15. Protein Nature of Filterable Viruses by Max A. Lauffer.

In addition to these chapters, there are two valuable tables included in the Appendix, consisting of 94 pages. These data have been reprinted from Government U.S.D.A. Circular No. 549 (1940), "Proximate Composition of American Food Materials" and U.S.D.A. Publication No. 572 (1945) "Tables of Food Composition in Terms of Eleven Nutrients."

Perhaps the most significant feature of Dr. Sahyun's book resides in the emphasis which has been placed upon the interrelationships between proteins, amino acids, vitamins, minerals and caloric value. A more detailed chapter on the influence of carbohydrate and fat metabolism might have rounded out the nutritional viewpoint more completely.

The current decade has witnessed a new peak in the appreciation of proteins and amino acids in nutrition and therapeutics. Nevertheless, the overwhelming search for a panacea has resulted in some controversial therapeutic claims that must be clarified in order to hold this class of food substances at the high level of nutritional esteem which early investigators ascribed to it. This book does much to reestablish the significance and specificity of the proteins upon a sound basis despite the controversies which now exist in the comparative interpretations obtained from biological utilization studies on different species.

Another point in this volume's favor is the careful evaluation of experimental data evidenced before conclusions are drawn. For example, Dr. Deuel states, "It would appear that one can no longer consider that the sole function of protein is the building of body tissue." It is interesting to note how strongly this single statement may modify the conventional definition of the nutritional proteins.

The food technologist may be surprised to observe in these pages the position held by the proteins in health and disease—how on the one hand, a pattern of amino acids performs life-giving duties, yet on the other, produces one of the most potent of all toxins known, that of Clostridium botulinum.

While the paper is not of the best grade, the type is clear and legible. The book itself has a sturdy though inexpensive binding. The text is remarkably free of errors and is made readily available to the less intensive reader by a 13-page index prepared by one who must have appreciated how essential a good index is in this busy day and age. The volume is highly recommended for the food technologist, biochemist and nutritionist.

H. W. DORN.

News of the Institute

(Continued from page 6, preceding technical papers)

injury but he is reported to have fractured one or more vertebrae.

The many friends of Prof. Cruess in the I. F. T. will be happy to know that he is improving and the latest report states that he will not be permanently injured, although he will be hospitalized for several weeks after this item appears in print. He is in the Permanente Hospital, Oakland, California and he enjoys hearing from his friends.

I. F. T. MEMBERS SERVE NATIONAL RESEARCH COUNCIL

The following members of I. F. T. have been included in a Committee on Foods of the National Research Council, concerned with Quartermaster problems; M. L. Anson, L. E. Clifcorn, C. A. Elvehjem, C. N. Frey, W. F. Geddes, D. B. Hand, C. G. King, E. M. Mrak, R. C. Newton, B. E. Proctor, T. Rector, and G. F. Stewart.

Dr. B. S. Clark, of the American Can Company, Maywood, Illinois, has been appointed Chairman of the Packing, Packaging, and Preservation Committee, National Research Council Advisory Board on Quartermaster Research and Development.

IN MEMORIAM

Albert Epstein, of Epstein, Reynolds & Harris, Chicago, died of a heart attack in Tel Aviv, Israel, on December 22, 1948. Mr. Epstein was recognized as a leader in the technology of frozen and dried eggs. During the war he was Chairman of the Technical Committee of the National Egg Products Association.

Paul E. Alexander, of the American Can Co., died unexpectedly on January 25, 1949, at the St. Francis Hospital, Lynwood (near Los Angeles), following an operation. He had been associated with the American Can Company in various capacities since 1925. When their laboratory in Los Angeles was opened in 1945, he became the first research representative for Southern California and participated in the post-war expansion of the canning industry in that area. As a member of I. F. T., he served on the Executive Committee of the Northern California Section in 1941-42 and as Secretary-Treasurer in 1943-45. From 1945 to 1948 he was a member of the Executive Committee of the Southern California Section. He was unstinting in his time and effort in all his endeavors, and his integrity and loyalty were outstanding.

The sympathy of the Institute of Food Technologists, of which these men were members, is extended to their families.

Regional Section News

CHICAGO SECTION

The Illinois Institute of Technology has formed a Food Technology Council consisting of leaders in the food industries in the Chicago area and elsewhere, who will serve in an advisory capacity to council its staff in the development of its food technology program. Among those asked to serve on this Council are the following members of the Chicago Section of the Institute of Food Technologists: Roy C. Newton (Chairman), Thomas M. Rector and Victor Conquest (Vice Chairmen), Milton E. Parker (Secretary), Berton S. Clark, George A. Crapple, Albert E. Elder, George Garnatz, Philip P. Gott, Charles E. Gross, Lloyd A. Hall, Lee Hickox, Rohland A. Isker, John Knowles, Henry R. Kraybill, Paul D. V. Manning, F. N. Peters, H. N. Riley, Fred P. Siebel, E. S. Stateler, and Robert I. Tenney.

Lee Hickox, Vice-President of the Container Laboratories, Chicago, is directing a graduate course in Food Packaging Materials and Methods at the Illinois Institute of Technology. The course will comprise sixteen 2-hour lectures, to be given in the period between February 16 and June 8.

Representatives from the Chicago Section who were present at the I. F. T. Council Meeting on January 16 were: B. S. Clark (Councilor-at-large), C. L. Smith, A. E. Stevenson, B. M. Shinn, and (as Alternates), W. E. Pearce and J. M. Jackson.

Clarence K. Wiesman, of Armour & Co., spoke on "Storage of Meats" at the Southeastern Conference of the Refrigeration Research Foundation, in Birmingham, Alabama.

Mr. and Mrs. D. L. Drummer announce the birth of a son, Dalibor, Jr., December 16.

Dr. Victor Conquest was a speaker at the Chicago Area Career Council for high school students in December, 1948 and also served as one of the counselors.

NORTHERN CALIFORNIA SECTION

At the December 29 meeting of the Northern California Section, the following individuals were elected members:

E. N. Develter (Kadota Fig Assoc.); J. A. Dreyer (Benner-Nawman, Inc.); R. A. Whitmore (Food Machinery & Chemical Corp.); C. P. Collier (Food Machinery & Chemical Corp.); W. C. Dietrich (Western Regional Research Laboratory); R. P. Smith (Golden State Co., Ltd.); and M. J. Simone (Western Regional Research Laboratory).

At this same meeting, it was decided to establish a temporary status for student members, to provide inclusion on *The Hornblower* mailing list and assessment of $1.00 for dues. This status will be subject to change when the By-Laws of the Section are revised and when the National Council takes action on the subject.

The present membership of the Section is 389. Of these, 125 were enrolled in 1948.

The Hornblower will be published monthly in 1949 instead of bi-monthly as in the past.

Members of the Program Committee of the Northern California Section are Sharp, Stumbo, Marsh, Owens, Lang, and Russ Perry.

Friends of Professor W. V. Cruess will be sorry to learn that he is temporarily incapacitated. While he was repairing, at his ranch, a pipe that had burst as a result of the cold spell in January, a wrench slipped and he fell from a water tower. Two vertebrae were broken, and he will be out of circulation for some time. He will certainly appreciate receiving notes from his friends while he is at home.

Dr. Paul F. Sharp, Director of Research for Golden State Co., Ltd., was appointed Director of the Experi-

mental Station, Department of Agriculture, University of California, Berkeley. This appointment became effective on January 1st.

M. L. Crouthamel, West Coast Quality Control Representative for H. J. Heinz Co., has been promoted to the newly created position of manager of all factory quality control. He becomes the head of the research and quality control staff, with headquarters in Pittsburgh.

Miss Shirley I. Vollmer, formerly of the Hallmark Testing Service, Division of Safeway Stores, is now with the Department of Home Economics of General Mills, in Minneapolis.

NORTHEAST SECTION

The Boston Yacht Club was the meeting place for the Northeast Section on February 7. Here members enjoyed a real New England fish chowder and subsequently listened to papers on various phases of the fish industry, as follows:

"Technological Problems in the Fishery Industries," by Harold E. Crowther (Atlantic Coast Fisheries Co., Boston).

"Functions of an Industrial Fisheries Laboratory," by Charles E. Shackleford (The Great Atlantic & Pacific Tea Co., Boston).

"By-Products of the Fishing Industry," by Sidney L. Feener and Earl P. McFee (General Seafoods Corporation, Boston, and Gorton-Pew Fisheries Co., Ltd., Gloucester, Mass.).

"Sanitation Problems of the Fishing Industry," by Stanley P. Hurley (Gorton-Pew Fisheries Co., Ltd., Gloucester, Mass.).

"Some Objectives of Fishery Technology," by William F. Hampton (General Seafoods Corporation, Boston).

Dr. Joseph F. Puncochar, Director of the Boston Fishery Technology Laboratory, U. S. Fish and Wildlife Service, presided as chairman of the February 7 meeting.

Robert S. Scull, Vice-Chairman of the Northeast Section, joined the United States State Department the first of the year and has agreed to go overseas, in connection with the Marshall Plan effort. He will be in charge of food processing in Greece. Ernest C. Crocker has been appointed to fill his place as Vice-Chairman of the Section.

The new American Association of Candy Technologists has formed a section in this area. Charles Carilli of the Edgar P. Lewis Co. is Chairman and Donald Mitchell of the Walter Baker Co. is Secretary-Treasurer.

A. M. Kaplan has left the Department of Food Technology at the University of Massachusetts and has taken a position with the Division of Microbiology, Bureau of Agricultural and Industrial Chemistry, U. S. D. A., Beltsville, Md.

SOUTHERN CALIFORNIA SECTION

The fifty-sixth meeting of the Southern California Section was held on January 19 at the California Consumers Corporation of Pasadena. An appetizing meal utilizing some of the foods processed in the plant was served to 91 members and their guests. Following dinner, the President of the Corporation, Roy M. Hagen, gave a short talk on "Frozen Foods." Introductions were made of the men most closely concerned in the organization of the plant, namely, Douglas Jardin (plant engineer), Fred Burden (plant superintendent), Bill Ost (superintendent of transportation, warehouse and shipping), and George Martin (quality control). Interesting information concerning the food processed and the equipment used in the plant was given. A tour of the plant was also a feature of the meeting.

ST. LOUIS SECTION

On January 27, the St. Louis Section met at the Falstaff Brewing Corporation, where they heard a talk on "Organoleptic Evaluation of Edible Oils" by Dr. J. C. Cowan, head of the Oil and Protein Division, Northern Regional Research Laboratory, Peoria, Illinois.

NEW YORK SECTION

Dr. R. C. Sherwood has become Technical Director of the combined Vanillin Division of General Drug, Inc. During the war he was with the Civilian Requirements Branch of the War Food Administration.

E. D. Robbins, formerly of the Chef Boy-Ar-Dee Quality Foods, Inc., Milton, Pa., is now chemist for Limpert Bros., Inc., New York.

Dr. Orville E. May, of Atlanta, Georgia, has been elected Vice-President in charge of quality control of the Coca-Cola Co., New York City. He will direct all the scientific activities of the Coca-Cola Co. and will be in charge of all branch laboratories.

WESTERN NEW YORK SECTION

At an Executive Committee meeting on December 20, 1948, Willard Hahn of the Beech-Nut Packing Co. was elected a national councilor, bringing the number of councilors for the Western New York Section to two.

PHILADELPHIA

On January 13, members of the Philadelphia Section met at the Campbell Soup Co. in Camden, N. J., when they heard an address on "The President Speaks" by the national I. F. T. president, Dr. H. C. Diehl, and had an opportunity to meet with him informally.

MARYLAND

On January 14, the Maryland Section met for its regular session at the Hotel Stafford in Baltimore. Following the dinner, Lt. Col. Edward S. Hopkins of the Baltimore Bureau of Water Supply spoke on "Water Purification and Its Relation to the Food Industry."

MILK AND FOOD SANITARIANS

The 36th Annual Convention of the International Association of Milk and Food Sanitarians, Inc., will be held in Columbus, Ohio, on October 20th, 21st and 22nd, 1949, with official headquarters at the Deschler-Wallick Hotel.

The new roster of officers of the Association for 1949 is as follows: President, A. W. Fuchs, U. S. Public Health Service, Washington, D. C.; First Vice-President, M. R. Fisher, D. V. M., Department of Public Welfare, St. Louis, Mo.; Second Vice-President, K. G. Weckel, Ph.D., University of Wisconsin, Madison, Wis.; Third Vice-President, C. Sidney Leete, State Department of Health, Albany, N. Y.; Secretary-Treasurer, George A. West, Rochester Health Bureau, 44 Marshall Street, Rochester 2, N. Y.

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